

(19) 日本国特許庁 (J P)

(12) 公開特許公報 (A)

(11) 特許出願公開番号

特開2002-161577

(P2002-161577A)

(43) 公開日 平成14年6月4日 (2002.6.4)

(51) Int.Cl.⁷

E 0 3 F 5/14

識別記号

F I

E 0 3 F 5/14

テーマコード (参考)

2 D 0 6 3

審査請求 有 請求項の数 3 書面 (全 6 頁)

(21) 出願番号 特願2000-402978 (P2000-402978)

(22) 出願日 平成12年11月27日 (2000.11.27)

(71) 出願人 599050365

株式会社サンユウ

東京都目黒区上目黒1丁目4番3号

(72) 発明者 田中 満

東京都目黒区上目黒1丁目4番3号株式会
社サンユウ内

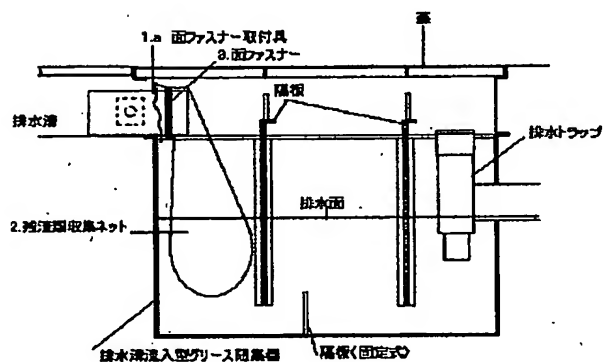
Fターム (参考) 2D063 DB01 DB04 DB08

(54) 【発明の名称】 グリース阻集器における残渣類回収装置

(57) 【要約】 (修正有)

【課題】従来のグリース阻集器では、残渣篋の設置位置が排水面に近く、ステンレス製の自重に残渣の重さを加えるとかなりの重量があり回収時引き上げがしづらい。残渣篋は通過孔の面積が固定でよく清掃しないと詰まり、残渣類は篋をオーバーフローして2槽目以降に流出してしまう。ゆえに残渣篋の金網などに付着した油脂類は、よく洗浄しなければならないが、作業の煩わしさから放置されがちにあり、グリース阻集器出側の排水管の詰まりや浄化槽・貯留槽の負荷の拡大につながっている。

【解決手段】本発明は、グリース阻集器流入口部分に排水中に混入している残渣類を収集し回収する手段として、従来の残渣篋の代わりに目が細かく伸縮性に富むネットを取り付け、細かい残渣まで収集できる機能を持たせ、更に面ファスナーとネットの各メッシュの合致による接着特性を利用し着脱を容易にする。



【特許請求の範囲】

【請求項 1】 排水溝（又は排水管）よりグリース阻集器流入口を經由してグリース阻集器に至る範囲において、グリース阻集器流入口部に取り付ける面ファスナー取付具（1. a, 1. b）と面ファスナー（3）、残渣類収集ネット（2）により構成される、流入する残渣類の収集と回収が確実で容易に行えることを特徴とする装置。

【請求項 2】 既存の排水溝の寸法（幅）にかかわらず、請求項 1 に記載した装置を誰でも簡単に設置できるように拡張機能を備えた、伸縮用ナット（7. a, 7. b）、連結棒（8）、突っ張りボルト（6. a, 6. b）、圧着板（5. a, 5. b）、及びスライドできるように上下に分割された胴体（9, 10）、胴体に取り付けた面ファスナー通し（4）から構成された面ファスナー取付具（1. a）。

【請求項 3】 既存の排水管に請求項 1 に記載した装置を設置できるように両面に凹凸を持つ面ファスナー（4）をステンレス製締め具（13）に巻き込んだ面ファスナー取付具（1. b）の製作方法。

【発明の詳細な説明】

【0001】

【発明の属する技術分野】 本発明は、排水中に混入している残渣類を収集し回収する手段である従来の金網やパンチングメタル製残渣篋に替わる方法として、グリース阻集器流入口部分に、目が細かく伸縮性に富むネットを取り付け、細かい残渣まで収集できる機能を持たせ、更に面ファスナーとナイロン製ネットの各メッシュの合致による接着特性を利用し着脱を容易にした装置に関するものである。

【0002】

【従来の技術】 図 12 に記載したように厨房などの排水は、排水溝（へ）（又は排水管）を通り、グリース阻集器の流入口よりまず残渣篋（イ）に入る。残渣篋（イ）は、6 メッシュ程のステンレス製金網かパンチングメタルで構成されており、大きな目の残渣は篋を持上げる事により回収できるが、米粒大以下の細かい残渣類は篋を透過してしまいグリース阻集器の底部に堆積し汚泥（チ）となる。沈殿した汚泥は、2～4 週間ごとに清掃して除去しなければならないが、産業廃棄物のため殆どの厨房では外部の業者に処理を委託している。従業員は、毎日業務終了時に残渣篋（イ）を持上げて残渣を回収するが、残渣篋（イ）の金網やパンチングメタル部に付着した油脂類などを洗浄しなければならない。

【0003】

【発明が解決しようとする課題】 図 12 に記載したように、残渣篋（イ）の設置位置が排水面（リ）に近く（低い位置にあり）、また材質がステンレス製のため収集した残渣の重さを加えると重量がかさみ、残渣篋（イ）の回収時は引き上げづらい欠点がある。残渣篋（イ）の金

網やパンチングメタル部に付着した油脂類などは、詰まりや臭いの原因になるため洗浄が必要となるが、厨房内に洗浄スペースが無い場合、作業が非常に煩わしいため清掃頻度は徐々に少なくなる傾向にある。また残渣篋（イ）は通過孔の面積が一定なので時間の経過とともに残渣や油脂分の付着により詰まってしまい、残渣篋（イ）は篋をオーバーフローして 2 槽目以降に流出してしまう。グリース阻集器には、ステンレス製か鉄製の蓋（ロ）があるためこの流出に気がつかず放置される危険がある。本来、厨房従業員により定期的に又は汚泥堆積が酷くなった都度清掃を実施すべきであるが、実際はこれら作業の煩わしさから放置されがちにあり、グリース阻集器出側の排水管の詰まりや浄化槽・貯留槽の負荷の拡大につながっている。

【0004】

【課題を解決するための手段】 本装置は、原因の 1 つである従来の残渣篋（イ）の代わりに、グリース阻集器の流入口部に残渣類収集ネット（2）を取り付けることにより、これまでは透過してしまう細かい残渣類も収集可能にし、また流入口に直接取り付けるのでオーバーフローの危険も排除できる。残渣類収集ネット（2）は伸縮性があるので、ネット内面に付着した残渣類により目詰まりしてもネット自身の膨張により、目が拡大し排水が抜けやすくなる特性を持つ。更にネットの着脱を容易にすることにより、簡単な作業にて確実な残渣の回収を可能にし、厨房従業員の努力で処理をするという本来の姿の排水浄化に取り組むことができる。

【0005】

【発明の実施の形態】 本発明では、図 1～図 4 に示すようにグリース阻集器流入部に面ファスナー取付具（1. a, 1. b）を設置し、目の細かいナイロン製編みこみ素材により構成された残渣類収集ネット（2）を取り付ける。ネットは、残渣類の収集とともに内壁に残渣類が付着して目詰まりしていくが、内側の水圧により膨張していき、目が拡大することにより水分は透過していく。そのためオーバーフローの心配なしに長時間にわたり残渣類のみを効率よく収集できる。

【0006】 残渣類がネット（2）内に十分収集された時点でネット（2）を面ファスナー取付具（1. a, 1. b）から外し、よく水をきってから生ごみとして回収し処分を行い、面ファスナー取付具（1. a, 1. b）に新しいネット（2）を取り付ける。

【0007】 ネットの装着手段として面ファスナー（3）の接着特性を利用する事により、取り付け、取り外しを誰でも簡単な作業にて行えるようになる。ナイロン製編み込み構造の残渣類収集ネット（2）と面ファスナー（3）の各メッシュの相性が合致しているため、流入方向への力に対してはネットを強く保持でき、垂直方向（はずす方向）には簡単に剥がしやすい特性を持つ。ネット（2）の装着時は、残渣類収集ネット（2）を面

ファスナー（３）に被せてから上部より軽く押さえるだけで装着が可能である。

【０００８】残渣類収集ネット（２）の交換周期は、実際の厨房で排出される残渣量や残渣の質（油分の多少、鱗の含有など）によって差があるが、１日来店数３００人の平均的食堂で３日間程度であり、従来の残渣箒を毎日引き上げて清掃することと比較すると大幅な業務改善が図れる。

【０００９】

【実施例】排水溝型グリース阻集器の流入口部に取り付ける面ファスナー取付具（１，ａ）は、図５、図６に記載しているように上胴体（１０）、下胴体（９）、圧着板（５．ａ，５．ｂ）、突っ張りボルト（６．ａ，６．ｂ）、伸縮用ナット（７．ａ，７．ｂ）、連結棒（８）、ガイド片（１１．ａ，１１．ｂ）、面ファスナー通し（４）、面ファスナー（４）より構成される。

【００１０】図７に記載のとおり面ファスナー取付具（１，ａ）は、上胴体（１０）と下胴体（９）がコの字と逆コの字をかすがいに重ね合わせた形状で組み込まれ、それぞれの胴体内側の対象位置には、圧着板（５．

【００１１】伸縮用ナット（７．ａ，７．ｂ）は、それぞれが逆ネジの関係にあり連結棒（８）に溶接で固定されているため、連結棒（８）を正回転させると突っ張りボルト（６．ａ，６．ｂ）がそれぞれ外側に押し出され、逆回転させると内側に収納される機能を持つ。この原理を利用して圧着板が溶接で固定されている上胴体（１０）と下胴体（９）は、それぞれに固定されたガイド片（１１．

【００１２】図６（ａ）は、最も縮小した状態（幅寸法は、１２ｃｍ）をしめす。図６（ｂ）は、最も伸張した状態（幅寸法は、２０ｃｍ）をしめす。この伸縮寸法幅は、既存の厨房排水溝幅方向の仕上がり寸法が、１２ｃｍ～２０ｃｍの範囲が最も多いことから決定されている。従って、この範囲の排水溝に面ファスナー取付具（１，

【００１３】ナイロン製の残渣類収集ネットに残渣や排水の荷重が掛かる事による、ステンレス製の面ファスナ

一取付具（１，ａ）の上辺角部での引っ掛け破損防止の目的で上辺２辺の角部は８Ｒ以上の丸み持たせる。また面ファスナー取付具（１，

【００１４】排水管流入型グリース阻集器の面ファスナー取付具（１．

【００１５】図４に記載したように、排水流入管の内ネジ部分に合致した外ネジをもつ塩化ビニール管（１２）に面ファスナー取付具（１．

【００１６】面ファスナー（３）の油脂などによる劣化による交換が可能にする目的で、排水溝流入型グリース阻集器の面ファスナー取付具（１．

【００１７】

【発明の効果】上述のように本発明の残渣類回収装置は、残渣類収集ネット（２）による細かい残渣類の収集により、グリース阻集器内の汚泥の堆積量を著しく減少する事ができる。また厨房従業員による回収作業も、従来の重い残渣箒の引き上げや清掃業務はなくなり、新たに実施する残渣類収集ネット（２）の取り替え作業が面

【００１８】面ファスナー取付具（１．

【図面の簡単な説明】

【図１】本発明を実施したときの排水溝流入型グリース阻集器全体の構造断面図である。

【図２】本発明を排水溝部分に取り付けたときの取り付

け部の側面図である。

【図 3】本発明を実施したときの排水管流入型グリース阻集器全体の構造断面図である。

【図 4】本発明を排水管部分に取り付けたときの取り付け部の側面図 (a) と矢視図 (b) である。

【図 5】面ファスナー取付具 (1. a) の組立て時の斜視図である。

【図 6】面ファスナー取付具 (1. a) に面ファスナー (4) を装着した時の斜視図である。

【図 7】面ファスナー取付具 (1. a) の分解した時の斜視図である。

(a) 下胴体部分

(b) 伸縮用連結具

(c) 上胴体部分

【図 8】面ファスナー取付具 (1. a) の最小伸張時の正面図と最大伸張時の正面図である。

(a) 最小伸張 (12 cm) 時の正面図

(b) 最大伸張 (20 cm) 時の正面図

【図 9】面ファスナー取付具 (1. a) の最大伸張時の上面図である。

【図 10】面ファスナー取付具 (1. b) に面ファスナー (3) を装着する製造工程を示す斜視図である。

(a) ステンレス製締め具

(b) ステンレス製締め具に面ファスナーを巻き込む途中

(c) 面ファスナー取付具 (1. b) の完成図

このあと塩化ビニール管 (12) に取り付ける

【図 11】面ファスナー取付具 (1. a) に面ファスナー (3) を装着する工程を示す正面側からの斜視図である。

(a) 面ファスナー (3) を面ファスナー通し (4) に挿入して一周させる様子。

(b) 面ファスナー (3) を 7~8 cm 程度重ねて張り合わせる。面ファスナー (3) は、表裏が凹凸構造にな*

* っている。

(c) 面ファスナー (3) の重ね合わせ部分を面ファスナー通し (4) に押し込む。面ファスナーの終端が面ファスナー通し (4) で被覆されるため剥がれない。

【図 12】従来のグリース阻集器の構造断面図

【符号の説明】

1. a 面ファスナー取付具 (1. a)

1. b 面ファスナー取付具 (1. b)

2. 残渣類収集ネット

3. 面ファスナー

4. 面ファスナー通し

5. a 圧着板 (下胴体用)

5. b 圧着板 (上胴体用)

6. a 突っ張りボルト (下胴体)

6. b 突っ張りボルト (上胴体)

7. a 伸縮用ナット (正ネジ)

7. b 伸縮用ナット (逆ネジ)

8. 連結棒

9. 下胴体

10. 上胴体

11. a ガイド片 (上胴体用)

11. b ガイド片 (下胴体用)

12. 塩化ビニール管

13. ステンレス製締め具

14. 締め付けボルト

イ. 残渣篋

ロ. 蓋

ハ. 隔板

ニ. 隔板 (固定式)

ホ. 排水トラップ

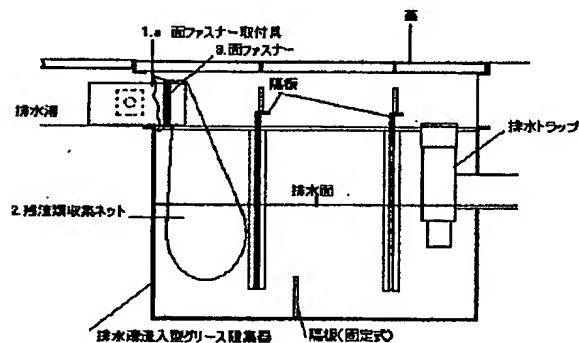
ヘ. 排水溝

ト. 浮上油

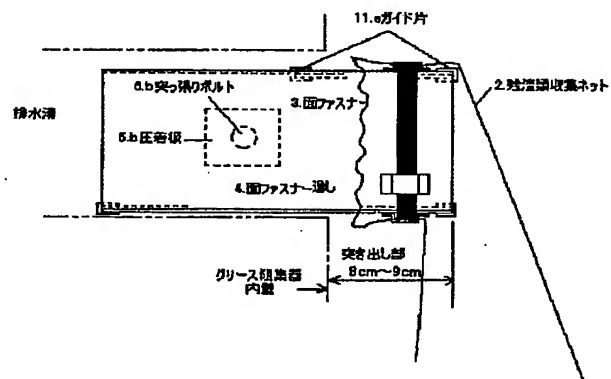
チ. 体積汚泥

リ. 排水面

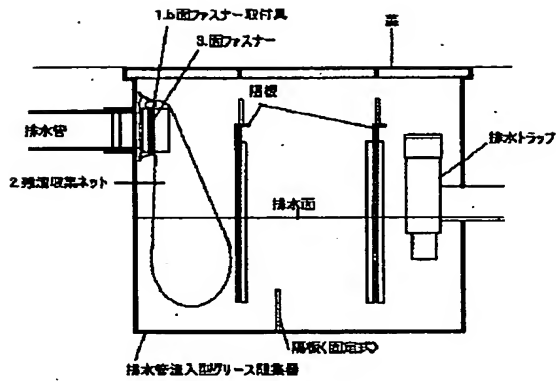
【図 1】



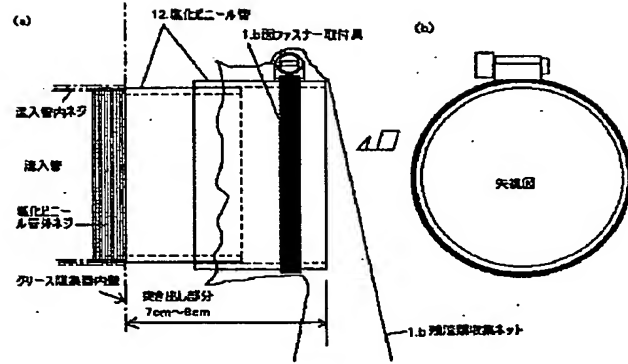
【図 2】



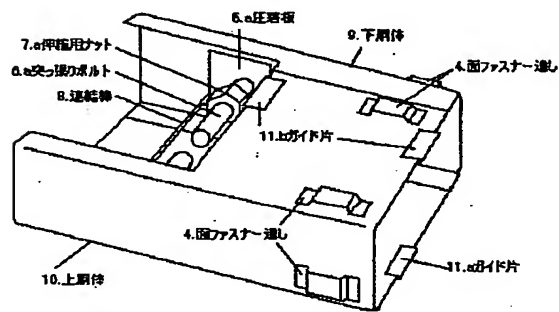
【図3】



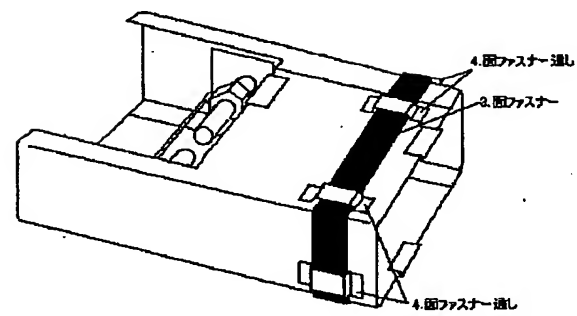
【図4】



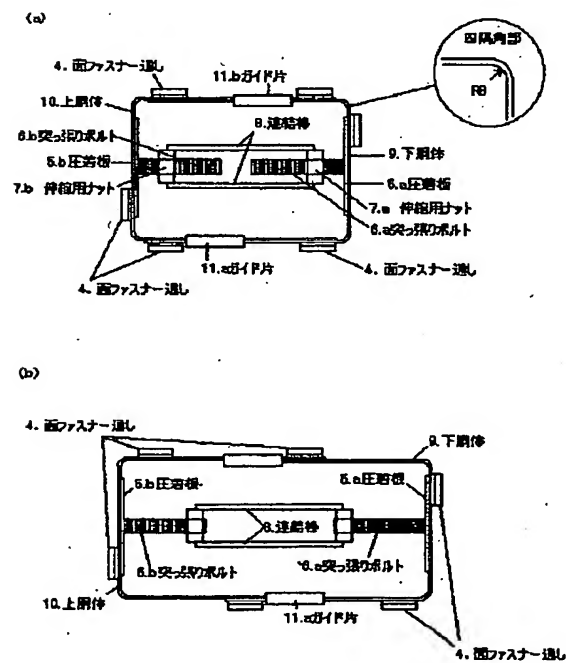
【図5】



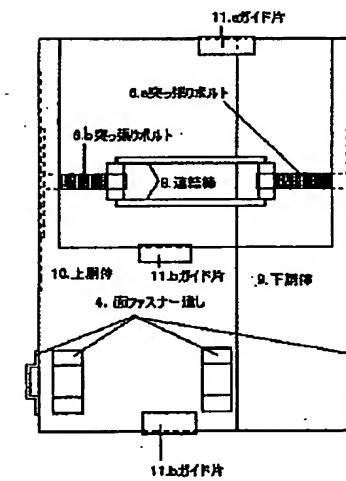
【図6】



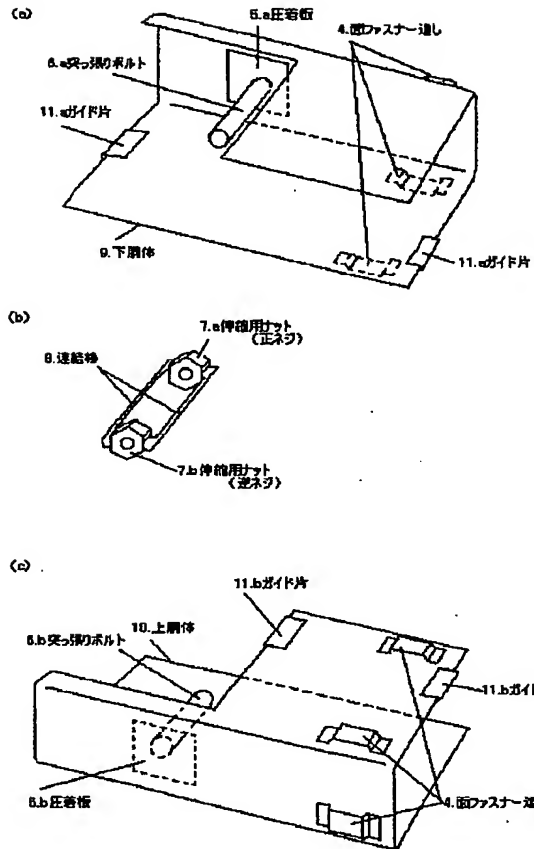
【図8】



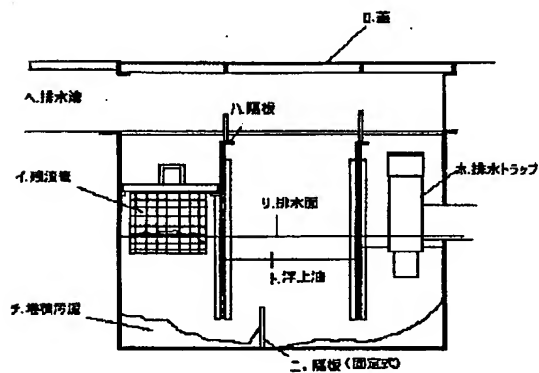
【図9】



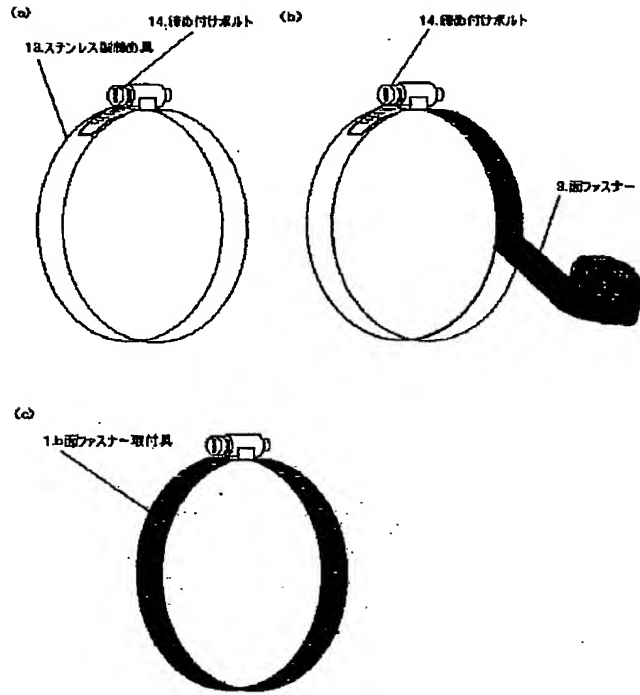
【図7】



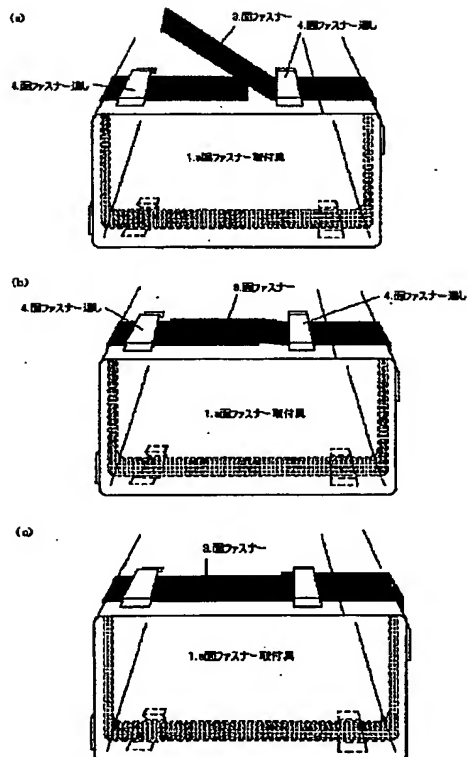
【図12】



【図10】



【図11】



English Translation of

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2002-161577

(43)Date of publication of application : 04.06.2002

(51)Int.Cl.

E03F 5/14

(21)Application number : 2000-402978

(71)Applicant : SANYUU:KK

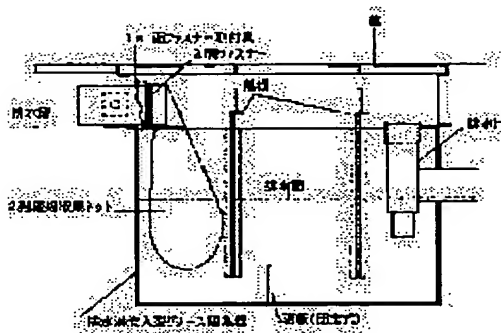
(22)Date of filing : 27.11.2000

(72)Inventor : TANAKA MITSURU

(54) RESIDUAL COLLECTING DEVICE IN GREASE INTERCEPTOR

(57)Abstract:

PROBLEM TO BE SOLVED: To solve such a problem that a drain pipe at the exit side of a grease interceptor is clogged sometimes due to the troublesome works although oil and fats stuck to a mesh wire or the like must be frequently cleaned since the area of passing holes of the residual cage is fixed and easy to clog without cleaning and the residual is apt to overflow from the residual cage and flow out to the second or the following stage because the installation position of the residual cage is near to the drain water face level and the stainless steel own weight additional to the residual weight is considerably large in a conventional residual interceptor, and hence, it is hard to lift up the cage in collection and hence, the cage is apt to be left as it is.



And the reverse condition causes clogging of the drain pipe at the grease interceptor exit side and enlargement of burden of a storage tank.

SOLUTION: The residual interceptor is used for collecting residual mixed in drain in the vicinity of the inflow section into a grease interceptor. A fine and extensible net is set to a grease interceptor instead of a conventional residual cage to impart a function to catch even fine residual and removal is facilitated by making use of an adhesive characteristic brought by match of respective meshes of a facial fastener and the net.

LEGAL STATUS

[Date of request for examination] 16.04.2001

[Date of sending the examiner's decision of rejection] 15.04.2003

[Claim(s)]

[Claim 1] Equipment with which collection and recovery of the flowing residue which are constituted by the surface fastener fixture (1. a, 1.b) attached in the grease grease trap input section and the surface fastener (3) residue collection network (2) are characterized by the ability to be certain and carry out easily in the range which results in a grease grease trap via grease grease trap input from a gutter (or drain pipe).

[Claim 2] Had extension so that anyone could install easily the equipment indicated to claim 1 irrespective of the dimension (width of face) of the existing gutter. The nut for telescopic motion (7. a, 7.b), a coupling rod (8), a prop bolt (6. a, 6.b), The surface fastener fixture which consisted of surface fastener through (4) attached in the sticking-by-pressure plate (5. a, 5.b) and the fuselage (9 10) divided up and down so that it could slide, and the fuselage (1. a).

[Claim 3] The manufacture approach of the surface fastener fixture (1. b) which involved the surface fastener (4) which has irregularity in both sides so that the equipment indicated to the existing drain pipe at claim 1 can be installed in the clamp made from stainless steel (13).

[Detailed Description of the Invention]

[0001]

[Field of the Invention] this invention relate to the equipment which attached in a grease grease trap input part the network an eye be finely rich in an elasticity with a network , gave a function collectable to fine residue , used the adhesion property by agreement of each mesh of a surface fastener and the network made of nylon further , and made an attachment and detachment easy as the approach of replace with the conventional wire gauze and the residue cage made from a punching metal which be a means collect and collect the residue which mix during wastewater .

[0002]

[Description of the Prior Art] it indicated to drawing 12 -- as -- wastewater of a kitchen etc. -- gutter (**) (or drain pipe) -- a passage -- a grease grease trap -- it goes into residue cage (b) first from input. Although residue cage (b) consists of the wire gauzes made from stainless steel or punching metals of about six meshes and oversized residue can be collected by lifting a cage, the fine residue of a grain-of-rice large less or equal penetrates a cage, it deposits it on the pars basilaris ossis occipitalis of a grease

grease trap, and serves as sludge (h). Although precipitating sludge must be cleaned and removed every two - four weeks, it has entrusted processing to the external contractor in almost all kitchens for industrial waste.

Although an employee raises residue cage (b) and collects residue every day at the time of operating termination, he has to wash the fats and oils adhering to the wire gauze and the punching metal section of residue cage (b).

[0003]

[Problem(s) to be Solved by the Invention] If the weight of the residue collected since the installation location of residue cage (**) was near (being in a low location) and the quality of the material was a product made from stainless steel is applied to a wastewater side (Li) as indicated to drawing 12 , weight will increase, and there is a fault which is hard to pull up at the time of recovery of residue cage (b). Since the fats and oils adhering to the wire gauze and the punching metal section of residue cage (b) become plugging and a stinking cause of a thing, washing is needed, but when there is no washing tooth space into a kitchen, since the activity is very troublesome, cleaning frequency tends to decrease gradually. Moreover, since the area of a passage hole is fixed, residue cage (b) is got blocked by residue or adhesion for fats and oils with the passage of time, and residue (b) will overflow a cage and will flow into henceforth [2 tub]. Since there is a product made from stainless steel or iron lid (b), there is risk of not noticing this outflow but being left in a grease grease trap. Although it should clean whenever sludge deposition originally became severe periodically by the kitchen employee, it is that it tends to be left from the troublesomeness of these activities in practice, and has led to expansion of plugging of the drain pipe by the side of grease grease trap appearance, or the load of a septic tank and a depot.

[0004]

[Means for Solving the Problem] since this equipment enables collection of the fine residue penetrated until now instead of the conventional residue cage (**) which is one of the causes by attaching a residue collection network (2) in the input section of a grease grease trap and is attached to input direct picking -- the risk of overflow -- it can eliminate . Since a residue collection network (2) is elastic, even if it carries out blinding by the residue adhering to a network inside, by expansion of the network itself, an eye is expanded and it has the property from which

wastewater becomes easy to escape. Furthermore, by making attachment and detachment of a network easy, recovery of positive residue can be enabled by the easy activity, and wastewater purification of the normal state of being in which it processes by efforts of a kitchen employee can be tackled.

[0005]

[Embodiment of the Invention] In this invention, as shown in drawing 1 - drawing 4 , a surface fastener fixture (1. a, 1.b) is installed in the grease grease trap inflow section, and the residue collection network (2) constituted with the editing ***** material made of nylon with a fine eye is attached. Although residue adheres to a wall and blinding of the network is carried out with collection of residue, it expands with inside water pressure, and moisture is penetrated when an eye is expanded. Therefore, residue is efficiently collectable without worries about overflow over long duration.

[0006] When residue is enough collected in a network (2), after removing a network (2) from a surface fastener fixture (1. a, 1.b) and often removing excess water, it disposes by collecting as a kitchen garbage, and a new network (2) is attached in a surface fastener fixture (1. a, 1.b).

[0007] By using the adhesion property of a surface fastener (3) as a wearing means of a network, it can remove now by the activity with easy anyone by attaching. Since the affinity of each mesh of the residue collection network (2) and surface fastener (3) of the editing ***** structure made of nylon has agreed, to the force to the inflow direction, a network can be held strongly and, perpendicularly (direction to remove), it has the property which is easy to remove simply. At the time of wearing of a network (2), after putting a residue collection network (2) on a surface fastener (3), it can equip only by pressing down more lightly than the upper part.

[0008] Although the exchange period of a residue collection network (2) has a difference by the qualities (some of oil, content of a scale, etc.) of the amount of residue discharged in an actual kitchen, or residue, it is about 3 day room in the average dining-room of 300 one-day coming-to-the-store numbers, and an extensive operating improvement can be aimed at as compared with pulling up the conventional residue cage every day, and cleaning.

[0009]

[Example] The surface fastener fixture (1 a) attached in the input section of a gutter mold grease grease trap As indicated to drawing 5

and drawing 6 , an upper fuselage (10), a bottom fuselage (9), a sticking-by-pressure plate (5. a, 5.b), It consists of a prop bolt (6. a, 6.b), a nut for telescopic motion (7. a, 7.b), a coupling rod (8), the piece of a guide (11. a, 11.b), and surface fastener through (4), and a surface fastener (4).

[0010] To drawing 7 , as a publication a surface fastener fixture (1 a) An upper fuselage (10) and a bottom fuselage (9) are incorporated in the configuration where the character of KO and the character of reverse KO were laid on top of the clamp. In the object location of each fuselage inside It is equipped with the flexible [by which the sticking-by-pressure plate (5. a, 5.b) was welded to it] implement which is stubborn, is being fixed by welding with the bolt (6. a, 6.b), and is constituted from a nut for telescopic motion (7. a, 7.b), and a coupling rod (8) by the prop bolt (6. a, 6.b).

[0011] Since each has the relation of a reverse screw and is being fixed to the coupling rod (8) by welding, the nut for telescopic motion (7. a, 7.b) will be stretched if forward rotation of the coupling rod (8) is carried out, and when a bolt (6. a, 6.b) makes inverse rotation extrude and carry out outside, respectively, it has the function contained inside. The upper fuselage (10) to which the sticking-by-pressure plate is being fixed by welding using this principle, and a bottom fuselage (9) have the function which can be slid to right and left along with the piece of a guide (11. a, 11.b) fixed to each.

[0012] Drawing 6 (a) shows the condition (a width method is 12cm) of having reduced most. Drawing 6 (b) shows the condition (a width method is 20cm) of having elongated most. It is determined from the range of 12cm - 20cm having most measurements of the existing kitchen gutter cross direction as for this flexible dimension width of face. Therefore, in order to attach a surface fastener fixture (1 a) in the gutter of this range, after temporary installation and a coupling rod (8) can be turn to the proper location inside a gutter (location which the network wearing part show in drawing 2 projects 8cm · 9cm to the grease grease trap inside.) by hand, and the side face of each fuselage can be make to force and fix to the side attachment wall of a gutter through a sticking by pressure plate. If instruments, such as a driver, are fitted over the clearance between coupling rods and are finally bound tight strongly, a surface fastener fixture (1 a) is certainly fixable.

[0013] The corner of two sides of surfaces is radius-of-circle ***** more than 8R at the

purpose of the hook breakage prevention by the surface corner of the surface fastener fixture made from stainless steel by residue and the load of wastewater being applied to the residue collection network made of nylon (1 a).

Moreover, the corner of two sides of lower sides is also radius-of-circle ***** more than 8R at the purpose which escapes deposits, such as a climax part of the mortar by the finishing nonuniformity of the existing gutter base corner, and adhering dirt, at the time of the installation to the gutter of a surface fastener fixture (1 a). Thereby, the both-sides side of a surface fastener fixture (1 a) can be firmly stuck to a gutter side attachment wall by pressure only by the elongation force of a prop bolt.

[0014] In the surface fastener fixture (1. b) of a drain pipe inflow mold grease grease trap, as indicated to drawing 10, a surface fastener (double-sided surface fastener of a concavo-convex configuration of a front flesh side) is spirally twisted around the clamp made from stainless steel (13), and it equips using the adhesion property of a front flesh side.

[0015] A surface fastener fixture (1. b) is inserted in vinyl chloride tubing (12) with the outside screw corresponding to the inner screw part of a wastewater inhalant canal, and it is made to fix by fastening a clamping bolt (14), as indicated to drawing 4. There is an inner screw in the entry of a wastewater inhalant canal, and it inserts and attaches, making it rotate through a screw outside vinyl chloride tubing (12).

[0016] As indicated to drawing 11, with the surface fastener fixture (1. a) of a gutter inflow mold grease grease trap, a surface fastener (3) is stopped through surface fastener through (4) using the adhesion (double-sided surface fastener use of concavo-convex configuration of front flesh side) property of surface fasteners to a surface fastener fixture (1. a), in order for exchange by degradation by the fats and oils of a surface fastener (3) etc. to make it possible. In the surface fastener fixture (1. b) of a drain pipe inflow mold grease grease trap, as indicated to drawing 10, the clamp made from stainless steel (13) can be removed from vinyl chloride tubing, and a surface fastener can be exchanged.

[0017]

[Effect of the Invention] The residue recovery systems of this invention can decrease in number the alimentation of the sludge in a grease grease trap remarkably by collection of the fine residue by the residue collection

network (2) as mentioned above. Moreover, since exchange of the residue collection network (2) which recovery of raising of the conventional heavy residue cage or cleaning business by the kitchen employee is lost, and newly carries it out serves as an easy activity by adhesive use of a surface fastener (3), it is expectable that eye the top continues.

[0018] Anyone is simply attached by invention of a surface fastener fixture (1. a, 1.b), and since construction is unnecessary, it can install also within kitchen working hours. Spread is expectable in many kitchens in which the trouble is held by the maintenance of a current grease grease trap.

[Brief Description of the Drawings]

[Drawing 1] It is the structure section Fig. of the whole gutter inflow mold grease grease trap when carrying out this invention.

[Drawing 2] It is the side elevation of the installation section when attaching this invention in a gutter part.

[Drawing 3] It is the structure section Fig. of the whole drain pipe inflow mold grease grease trap when carrying out this invention.

[Drawing 4] It is the side elevation (a) and view Fig. (b) of the installation section when attaching this invention in a drain pipe part.

[Drawing 5] It is a perspective view at the time of the assembly of a surface fastener fixture (1. a).

[Drawing 6] It is a perspective view when equipping a surface fastener fixture (1. a) with a surface fastener (4).

[Drawing 7] It is a perspective view when a surface fastener fixture (1. a) decomposes.

(a) Bottom fuselage station

(b) The connection implement for telescopic motion

(c) Upper fuselage station

[Drawing 8] They are a front view at the time of the minimum elongation of a surface fastener fixture (1. a), and a front view at the time of the maximum elongation.

(a) The front view at the time of the minimum elongation (12cm)

(b) The front view at the time of the maximum elongation (20cm)

[Drawing 9] It is a plan at the time of the maximum elongation of a surface fastener fixture (1. a).

[Drawing 10] It is the perspective view showing the production process equipped with a surface fastener (3) in a surface fastener fixture (1. b).

(a) The clamp made from stainless steel

(b) The middle of involving a surface fastener in

the clamp made from stainless steel
(c) The final drawing of a surface fastener fixture (1. b)

It attaches in vinyl chloride tubing (12) after this.

[Drawing 11] It is a perspective view from the transverse-plane side which shows the process equipped with a surface fastener (3) to a surface fastener fixture (1. a).

(a) Signs that surface fastener through (4) is made to insert and go around a surface fastener (3).

(b) Make a surface fastener (3) rival in piles about 7-8cm. As for the surface fastener (3), the front flesh side has concavo-convex structure.

(c) Stuff the superposition part of a surface fastener (3) into surface fastener through (4). Since the termination of a surface fastener is covered with surface fastener through (4), it does not separate.

[Drawing 12] The structure section Fig. of the conventional grease grease trap

[Description of Notations]

1.a Surface fastener fixture (1. a)

1.b Surface fastener fixture (1. b)

2. Residue Collection Network

3. Surface Fastener

4. Surface Fastener Through

5.a Sticking-by-pressure plate (for bottom fuselages)

5.b Sticking-by-pressure plate (for upper fuselages)

6.a Prop bolt (bottom fuselage)

6.b Prop bolt (upper fuselage)

7.a Nut for telescopic motion (forward screw)

7.b Nut for telescopic motion (reverse screw)

8. Coupling Rod

9. Bottom Fuselage

10. Upper Fuselage

11.a The piece of a guide (for upper fuselages)

11.b The piece of a guide (for bottom fuselages)

12. Vinyl Chloride Tubing

13. Clamp made from Stainless Steel

14. Clamping Bolt

** Residue cage

** Lid

** Screen board

** Screen board (fixed)

** Wastewater trap

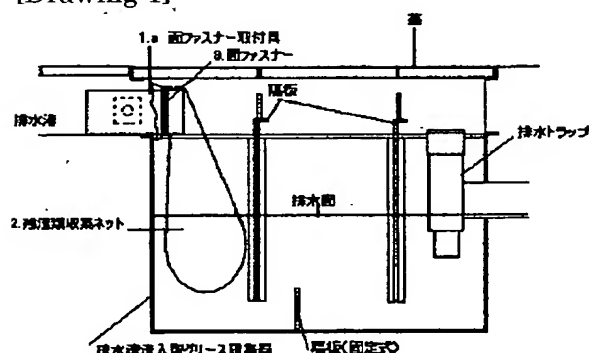
** Gutter

TO. Floated oil

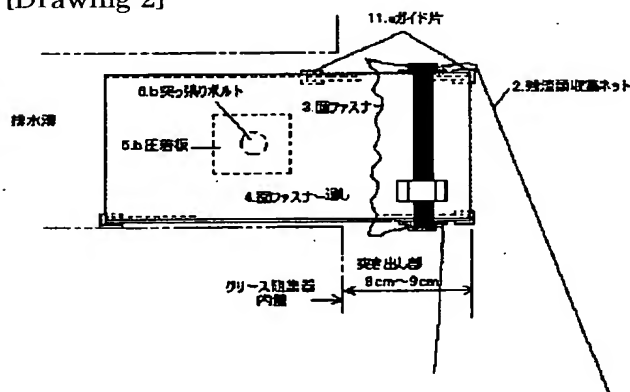
** Volume sludge

** Wastewater side

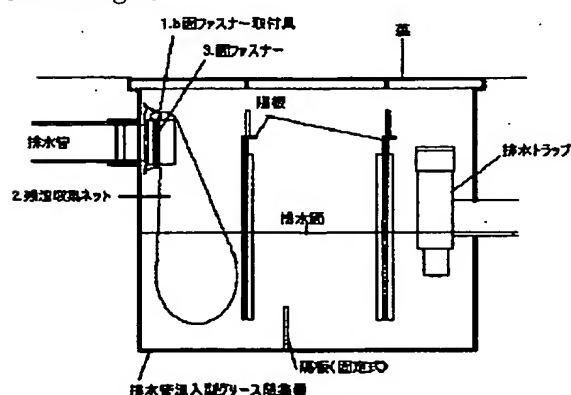
[Drawing 1]



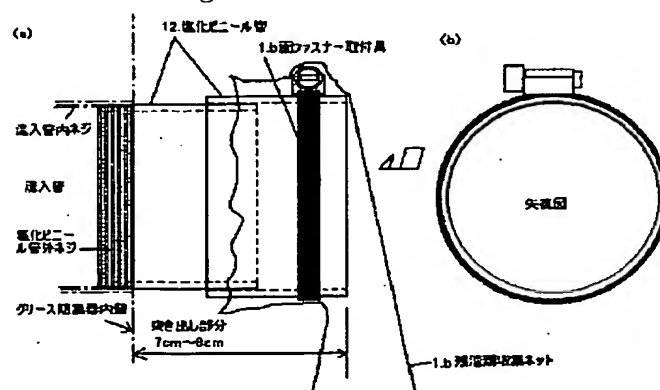
[Drawing 2]



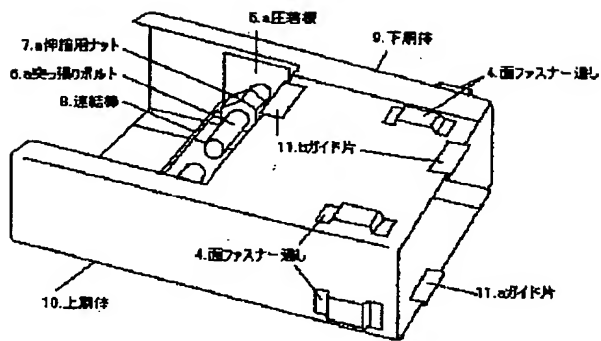
[Drawing 3]



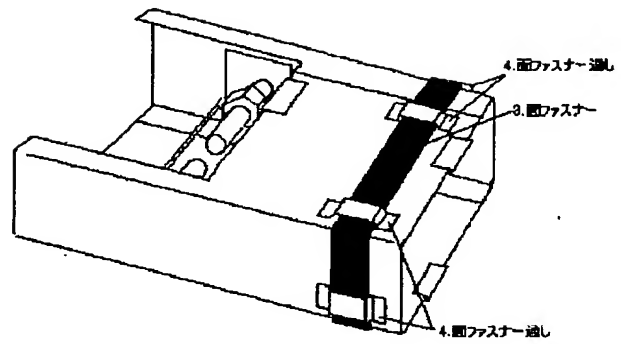
[Drawing 4]



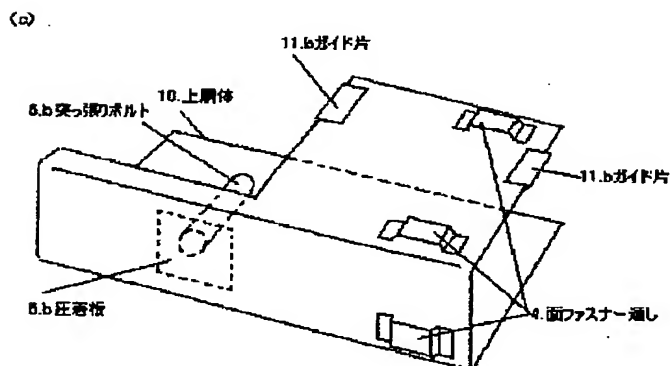
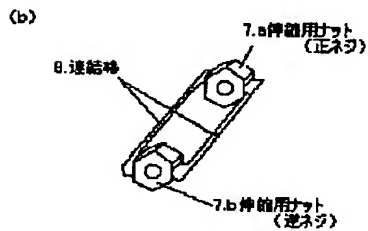
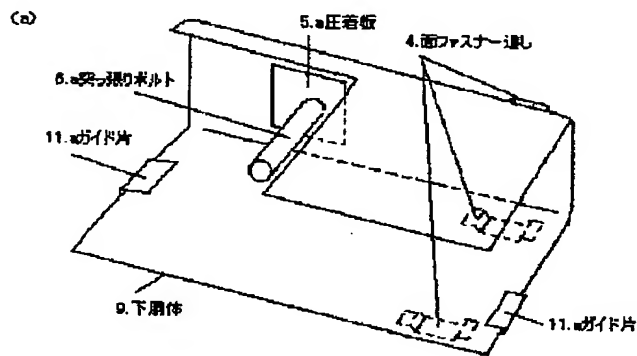
[Drawing 5]



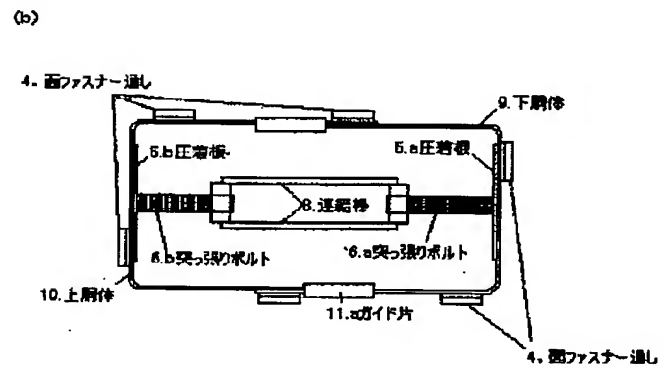
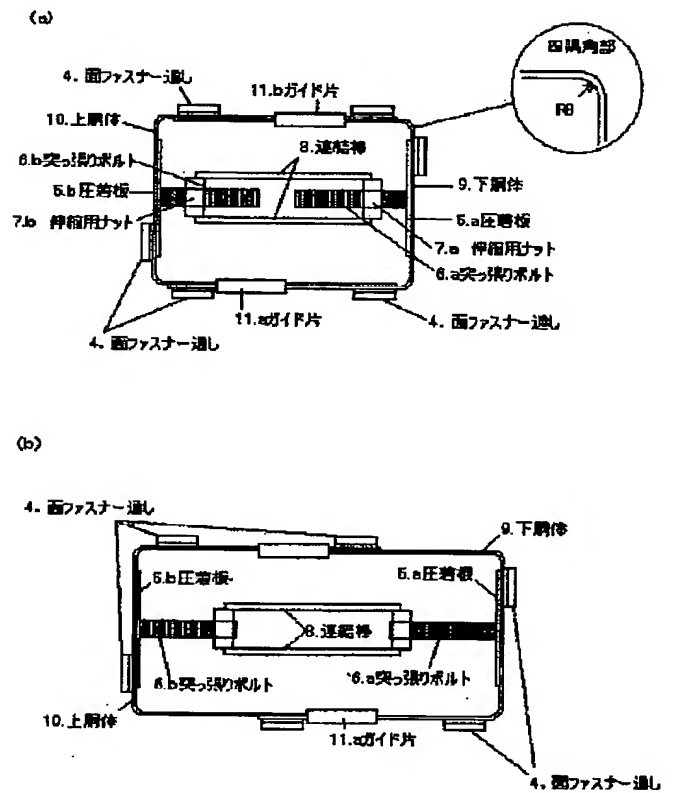
[Drawing 6]



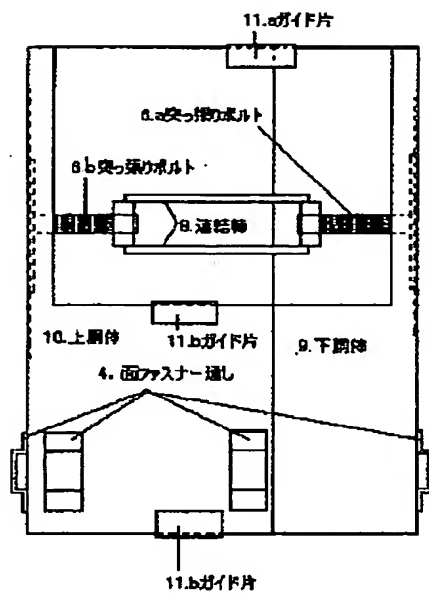
[Drawing 7]



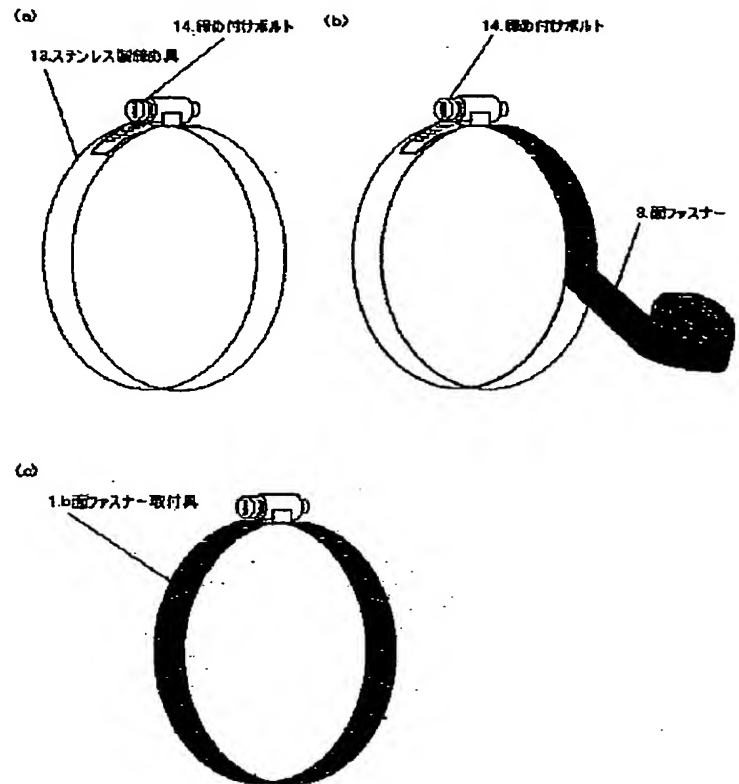
[Drawing 8]



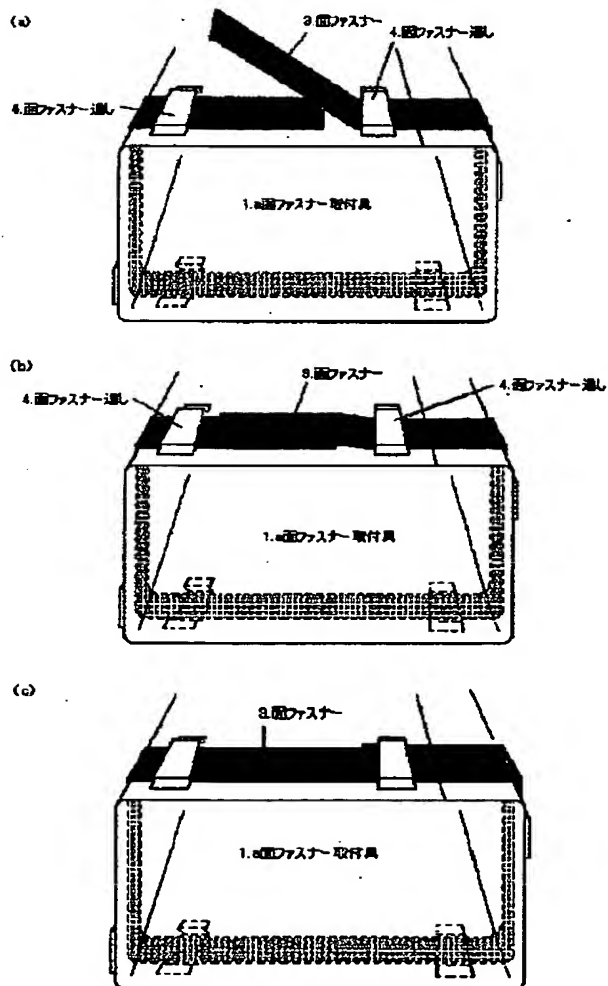
[Drawing 9]



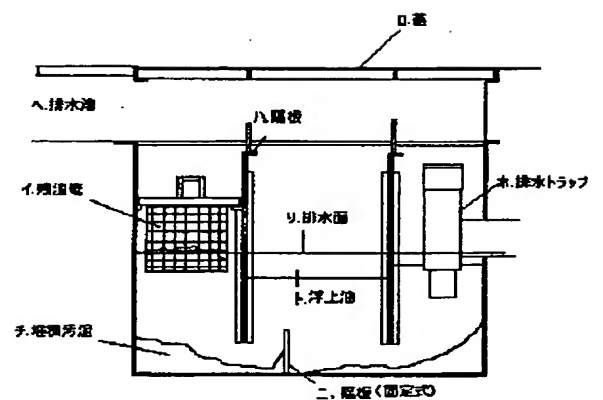
[Drawing 10]



[Drawing 11]



[Drawing 12]



This Page Blank (uspto)

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☒ BLACK BORDERS
- ☐ IMAGE CUT OFF AT TOP, BOTTOM OR SIDES
- ☐ FADED TEXT OR DRAWING
- ☒ BLURRED OR ILLEGIBLE TEXT OR DRAWING
- ☐ SKEWED/SLANTED IMAGES
- ☒ COLOR OR BLACK AND WHITE PHOTOGRAPHS
- ☐ GRAY SCALE DOCUMENTS
- ☒ LINES OR MARKS ON ORIGINAL DOCUMENT
- ☐ REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY
- ☐ OTHER: _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.

This Page Blank (uspto)